

NPDES STORMWATER EDUCATION PROGRAM SURVEY
(National Pollutant Discharge Elimination System)
Results of January 20, 2010 Survey

The findings from the survey follow each of the questions listed below.

1. The City of Tukwila has a spill hotline for residents to report illegal dumping, illegal discharges, and oil and hazardous waste spills, (206) 433-1860. Did you know how to report spills and illegal dumping/discharges and to whom?

57% did not know
43% did know how and to whom to report.

Tukwila residents can use the following ways of reporting spills and illegal dumping/discharges by either calling our Hotline phone number, 206-433-1860, the Department of Public Works phone number, 206-433-0179, by emailing our NPDES Coordinator at gvillanueva@ci.tukwila.wa.us and/or by reaching us in person at 6300 Southcenter Blvd., Suite 100, Department of Public Works.

2. The following are some possible causes of pollution in local waters. Please indicate if you believe that it is: 1) a **significant** source of water pollution in Tukwila; 2) it may contribute some **small** amount of pollution; or 3) probably is **not** a significant source of water pollution in Tukwila.

- Run off from lawns and landscape, including animal waste and fertilizer:
 - 45% believed it to be a significant source of water pollution
 - 41% believed it to contribute some small amount of water pollution
 - 14% thought probably not a significant source of water pollution in Tukwila
- Run off from roads and parking lots:
 - 64% believed it to be a significant source of water pollution
 - 29% believed it to contribute some small amount of water pollution
 - 7% thought probably not a significant source of water pollution in Tukwila

Run-off from lawns and landscaping are a significant source of pollution since it can carry animal waste and fertilizers to our local waters. Run-off from roads and parking lots carry oil and antifreeze. All run-off can be considered a significant source of pollution.

3. Water from neighborhoods and residences that run off streets, yards, and rooftops goes into a storm system of pipes, ditches, ponds, or storage vaults. To the best of your knowledge, what happens to the water after it enters the storm system?

22% believed it goes into the nearest body of water with treatment
57% believed it goes into the nearest body of water without treatment
21% believed it goes to a sewer treatment plant

In Tukwila, the stormwater system is completely separate from the sewer system and therefore stormwater never goes to the sewer treatment plant. For residential properties, over 90% of stormwater is either absorbed into the ground or goes untreated to the nearest body of water. In the business district, over 75% of stormwater is treated by the use of an oil/water separator or filter system, prior to leaving the property and entering the drainage basin where additional treatment occurs.

4. The following is a list of things that can get washed into the storm system and eventually into ponds, streams, and rivers. Do you believe that in Tukwila, it is: 1) a **significant** source of water pollution; 2) may contribute some **small** amount; or 3) probably **not** a significant source of water pollution?

- Pesticides and fertilizers from yards:

- 48% believed pesticides and fertilizers from yards are a significant source of water pollution
- 39% believed these may contribute a small amount of water pollution
- 13% believed probably not a significant source of water pollution

Since pesticides and fertilizers can be considered poisonous when not used correctly, these are a significant source of pollution when used inappropriately. Consider using an alternative and/or an environmentally safe product.

- Oils and other fluids from vehicles:

- 69% believed these contribute a significant source of water pollution
- 23% believed these may contribute some small amount of water pollution
- 8% believed probably not a significant source of water pollution

Oil or greases are known to be toxic to aquatic organisms at relatively low concentrations. They can coat fish gills, prevent oxygen from entering the water, and clog drainage facilities (leading to increased maintenance costs and potential flooding problems). No amount of oil, grease, or other fluids from vehicles belongs in surface water.

- Soapy water from washing cars on pavement/driveways:

- 22% believed soapy water contributes a significant source of water pollution
- 50% believed it may contribute a small amount of water pollution
- 28% believed it is probably not a significant amount of water pollution

Most soapy water contains phosphates and other chemicals that harm fish and water quality. The phosphates from the soap can cause excess algae to grow. As algae decay, the process uses up oxygen in the water that fish need.

- Pet waste left on the ground:

- 20% believed pet waste contributes a significant source of water pollution
- 46% believed it may contribute a small amount of water pollution
- 34% believed it is probably not a significant amount of water pollution

Pet waste is raw sewage! It is full of fecal coliform and can make people and animals sick. When left on the ground, rain or melting snow washes pet waste into the storm drains which in turn makes its way to our creeks, streams, ponds, river and consequently to the Puget Sound. You might be surprised to know that 20% of the bacteria found in surface water right here in Washington can be traced to dogs!

- Improper disposal of cleaning fluids, paint, and other household hazardous waste:
 - 56% believed these contribute a significant source of water pollution
 - 27% believed these may contribute a small amount of water pollution
 - 17% believed these are probably not a significant source of water pollution

These types of liquids carry toxic ingredients and harm our environment when not disposed of properly. They promote the growth of algae in ponds, rivers, and bodies of water. Please remember, a variety of non-toxic cleaners are available for use. Also, paint prior to 1978 may contain lead and prior to 1992 may contain mercury. Please, properly apply, store, and dispose of paint, no matter what date it was manufactured.

5. Of the list of products below that some people use on lawns and gardens, how much of each is used on your yard during a typical growing season? Would you say that, on your yard, 1) it is used a lot; 2) a medium amount; 3) very little; or 4) it's never used on your yard.

- Chemical fertilizers:
 - 4% use it a lot
 - 8% use it a medium amount
 - 34% use it very little
 - 54% never use it
- Pesticides such as insecticides or fungicides:
 - 3% use it a lot
 - 4% use it a medium amount
 - 33% use it very little
 - 60% never use it
- Weed & Feed or other weed killer:
 - 4% use it a lot.
 - 15% use it a medium amount.
 - 45% use it very little
 - 36% never use it
- Organic or slow-release fertilizers:
 - 4% use it a lot
 - 17% use it a medium amount
 - 35% use it very little
 - 44% never use it

- Water:
 - 15% use it a lot
 - 38% use it a medium amount
 - 36% use it very little
 - 11% never use it

Chemicals whether weed & feed, pesticides, insecticides, or fungicides can be very toxic to the environment. Use according to the manufacturer's instructions. This also includes organic or slow-released fertilizers. Store the containers in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater. When watering, be mindful that using too much might carry these toxins to the storm drainage system.

6. When you clean places like your driveway, walkways, or deck, do you typically:

- 44% sweep those areas
- 18% use a Blower
- 20% hose areas down
- 14% pressure wash areas
- 4% use water with soap or another cleanse

Sweeping or hosing your driveway, walkway or deck is great. It helps keep our community pristine and makes for a wonderful place to be. However, sweeping or hosing trash, yard debris, grass clippings, leaves, dirt, soap, or other cleansers can work their way to our streets. The storm drains are not part of the sewer system, so anything hosed or swept into the street flows untreated into storm drains and ultimately our ponds, creeks, rivers and then to the Puget Sound. Continue cleaning your driveway, but dispose of the debris properly and avoid using detergents or cleaners if they are going to work their way to the storm drains.

7. If you own a dog and go for walks, how is the dog waste dealt with?

- 24% picked up the waste every time
- 7% picked up the waste most of the time
- 2% left the waste on the ground most of the time
- 1% always left the waste on the ground
- 67% not applicable

By picking up after your dog, you play an important part in keeping our City and our rivers, creeks, ponds, and water bodies clean by preventing urban run-off pollution. It's a simple thing pet owners can do to help protect the environment for all of us.

8. If the dog waste is picked up, how is it typically disposed of?

- 28% bagged and put it in the trash
- 4% put in compost or yard waste collection
- 2% flushed it down the toilet
- 1% tossed it somewhere else
- 0% never picked it up
- 65% survey respondents did not have a dog

Pet owners need to make sure they pick up after their pets and properly dispose of pet waste in the trash. Proper individual actions can result in significant water quality improvements when carried out by the majority. Unlike some forms of stormwater pollutants, the individual citizens of our community can easily and economically manage pet waste.

9. At which of the following have you washed your vehicle or had it washed most often in the past year?

- 33% have washed their car at home
- 47% used a car wash or commercial coin operated car wash
- 7% used a charity car wash, such as a school or other fundraiser
- 11% haven't washed their car in the past year
- 2% do not have a car

Its okay to wash your car at home, but it's not okay to allow the sudsy wash water into the storm drains. Most soap contains phosphates and other chemicals that harm fish and water quality. If you do wash your car at home, wash it on the lawn where a good amount of the wash water will be filtered by your lawn. A commercial car wash facility, either self-serve or machine wash, is the preferred place to have your car washed since the water used is recycled, treated, and cleaned so there is no harm to the environment. Cleaning your car the right way helps support a healthy watershed, and helps restore salmon runs.

10. If you wash your vehicles at home, where does the wash water drain to?

- 24% indicated the wash water drains down the street
- 62% indicated the wash water drains onto gravel, dirt, or grass
- 10% indicated the wash water drains to a yard catch basin
- 4% indicated that they don't know

When you wash your car at home, all the soap, scum, and oily grit can make its way to the storm drain by way of street, catch basins and/or ditches. Wash your car on gravel or grass if there is a good amount of separation keeping the wash water from entering the storm drain.

11. When it comes to changing the motor oil, antifreeze, and other fluids in the vehicles in your household, do you or someone else?

- 11% always change at home
- 73% always take vehicles to a shop
- 16% some combination of the above

Keeping up maintenance on your vehicles will help you get more miles out of it. So, when you change your own antifreeze, motor oil, or other fluids make sure all spills are thoroughly cleaned up and dispose of rags used to wipe up the spills. Tukwila holds an annual household waste collection event to collect and dispose of potentially harmful materials. Contact the City for time and location.

12. If the motor oil or antifreeze is changed at home, what is typically done with the used fluids?

- 1% place it in the trash
- 0% pour it down the drain inside the house
- 0% pour it down a drain or ditch outside or in the street
- 0% pour it on the ground
- 1% keep it around the house/garage
- 20% take it to a collection facility/gas station/shop
- 25% do not change oil or antifreeze at home

It's very promising to know that a greater percentage surveyed does not change oil or antifreeze at home and those that do, take the used oil or antifreeze to a collection facility/gas station/shop. Again, Tukwila holds an annual household waste collection event to collect and dispose of potentially harmful materials. Contact the City for time and location.

13. If one of your vehicles leaked or spilled oil or antifreeze onto the pavement, which of the following would you be most likely to do?

- 11% would most likely hose it off
- 73% soak it up with an absorbent pad or other absorbent material
- 16% would probably not do anything

Left in place and/or hosing the spill off will most likely find its way into the storm drain system. When it rains, water washes over driveways and streets and flows directly down the nearest storm drain. The stormwater run-off sweeps up everything in its path, including leaves, litter, lawn chemicals, pet waste, garbage and puddles of antifreeze and oil.

14. Which of the following best describes your attitude toward making changes to help prevent water pollution?

- 46% were willing to make changes in their lifestyle, even if it involves sacrifices
- 43% were willing to make changes, if the changes are fairly easy
- 11% were convinced that there is not more you can do to make a difference

Pet owners are picking up their pet waste. Gardeners are using lawn and garden fertilizers and pesticides sparingly. Homeowners are making sure that yard clippings are being kept out of the street. Still there is a gap that needs to be closed. Soapy water from washing your car and pet waste left on the ground adds up to a significant amount of urban run-off pollution. Individually we can make a difference!

15. Of the following reasons that some people give for wanting to reduce water pollution, how important is it for you personally? Using a scale from 0 to 10, with “10” meaning “extremely important” and “0” meaning “not important at all”:

- Protecting fish and wildlife:
 - 69% indicated it was extremely important
 - 19% indicated it was very important
 - 12% indicated it was little to not important at all
- Protecting drinking water and food sources:
 - 79% indicated it was extremely important
 - 10% indicated it was very important
 - 11% indicated it was little to not important at all
- Maintaining the environment:
 - 66% indicated it was extremely important
 - 27% indicated it was very important
 - 7% indicated it was little to not important at all.

Protecting our fish, wildlife, drinking water, and food sources, along with maintaining the environment will assure a quality life for future generations to come.

Summary

With a goal to target a large number of responses from a broad sample of the population, Tukwila chose a mail survey. The survey targeted 1,000 residents located within zip code 98168, with 14.6% responding to the survey. The expected response rate was 3-4%, so thank you Tukwila!

The survey was based on the use of common household ingredients and typical activities associated with a home. While the majority of survey respondents was aware and seemed genuinely concerned about possible causes of pollution in our local waters, there is still considerable work that needs to be done. Some of the respondents had a low level of knowledge about the effects of common ingredients that are used around the house and the impact to our stormwater system. Overall, a majority of respondents are already doing the necessary steps in helping to reduce pollution from entering our storm drains.

There will need to be a greater effort in providing more information to the public about how to reduce urban run-off through storm drains in Tukwila. Education will help to provide the link between common activities and polluted water bodies. This survey result will serve as a tool for the City of Tukwila to use in developing messages that will most effectively communicate with the public about stormwater and pollution. Surveys in the future will need to take place to measure the progress of our educational campaign. The focus will need to be on:

- Chemicals and oil
- Sweeping and/or gardening
- Car washing
- Storm drain stenciling
- Pet waste

The education campaign will include:

- Brochures
- City website
- City Channel 21
- Inserts in utility bills
- Hazelnut newsletter

In addition, visiting classrooms in local schools to teach children about the impacts of pollution on our stormwater system will provide a foundation for a sustainable future.

Thank you for helping to keep Tukwila stormwater clean!

Special thanks to the City of Bonney Lake for their work and cooperation with this survey.